Written Testimony of Eugene A. DeJoannis,

Citizens for a Greener Manchester

Before the Connecticut General Assembly Energy and Technology Committee

March 8th, 2013

Written Testimony Concerning Governor's Bill 6360 AN ACT CONCERNING IMPLEMENTATION OF CONNECTICUT'S COMPREHENSIVE ENERGY STRATEGY.

PROPOSAL: Citizens for a Greener Manchester would like to see a 2-part policy change included in this energy plan in order to markedly expand the market for photovoltaic (PV) solar installations in our state. *First*, we would like to see an expansion of the **virtual net metering** program to include residential renewable generators. *Second*, we would like to see a change in CEFIA incentive funding policy for PV that limits installed capacity to expected annual household use, and instead **install the maximum possible area of PV on every house that qualifies with a good solar exposure**. CEFIA would then own that excess capacity and offer it as an investment to other homeowners who do not qualify for CEFIA funded PV projects because their roofs do not have adequate solar exposure. CEFIA would thereby maximize the generating capacity of every installation they help fund, and become an energy broker of the excess capacity installed. The investors would then pay a small tariff to the electric utility to transport the excess power to other nearby homes that do not have the needed solar exposure.

BACKGROUND: Up to 80% of Connecticut homes do not qualify for CEFIA supported PV installations because roofs either do not have a south-facing exposure, are shaded by trees beyond the homeowner's property line or perhaps just have a roof that is past its mid-life and will need replacement long before the solar panels wear out. These potential customers must be turned down by CEFIA's contractor network, representing the loss of a large potential market for renewable energy and associated economic development in our state. Clearly these potential customers are interested in getting access to solar power, and they at least believe they have the financial resources to pay for it. They just don't have a good place to put it on their property.

Why would a homeowner want to have an excess of solar panels on their roof ? There are several advantages to the homeowner with good solar access:

1. Their entire south-facing roof will be covered, for a uniform, more pleasing appearance.
2. Their roof will last longer as it would now all be shielded from direct sun degradation.
3. The house will be cooler in summer because of the roof shading affect.
4. They have the flexibility to modify their system size to meet their future needs. CEFIA would just modify their power purchase agreement to meet their changed needs (children move out, or new larger family moves into the home in future, or appliance changes). If they give up capacity they would receive the present value of their initial investment back.
5. It becomes a condition of receiving CEFIA funding subsidy.

What are the advantages of a policy of **maximized capacity installations plus virtual net metering**?

1. If we don't start maximizing roof area in every installation we do now, it will be several generations before it becomes economical to "develop" that good solar roof area, because it will be costly to go back and integrate a small addition into an existing system when the installers could do the whole roof with a single suitably sized inverter in one trip. But the sum of these excess capacity additions now will add significant capacity to the state's renewable resources.

2. Not adopting such a policy locks out 80% of homeowners who might be financially able to invest in solar. That is a huge source of capital that CEFIA could leverage into much greater installed kW with their limited funding.

3. Parking lots and brown fields may be available to host PV systems, but owners with capital to invest and interest in PV cannot utilize them. Homeowners are more or less by definition, financially stable and many will be able to afford a PV investment located somewhere that has a clear view of the sun if there house does not.

4. Solar City has come up with a 3rd financing option (the residential power purchase agreement). Two members of Citizens for a Greener Manchester have taken advantage of this method of financing solar. One of them is 4 houses from my house. I know from her low consumption only part of her roof will be covered (one occupant). When a family of 4 moves in, her PV system will be too small for them. The rest of her roof will be "wasted" and I am just 500 ft away with trees on 3 sides of my house, but no way to invest in PV on her roof.

5. One aspect of PV that is never considered is future consumption. CEFIA makes the assumption that a family that uses 500 kWh a month, will do so indefinitely. In reality children grow up and leave the home, and I know from careful monitoring, that monthly electric use is proportional to the number of residents. Fewer occupants mean reduced annual use. What happens to the excess that will be generated after the children leave home? The owners get the wholesale power rate for it, which was probably not included in their original payback calculation. Why not "sell" the excess capacity back to CEFIA, so they can market it to others who do not have good solar access.

6. Maximizing capacity on every installation will be much more efficient for our solar contractors. Once they are set up on a site, they can install more extra capacity at very low marginal cost.

CONCLUSION: If we want to bring residential solar to widespread use we have to find a way to involve the 80% of homeowners who do not have good solar access. I don't think we can afford to just ignore them; they are the 900 pound gorilla in the room. Bring them on board and we will have a much larger solar market, and more rapid expansion. I think this could be a huge boost to solar penetration that CEFIA could enable if we can change the policy on wheeling power around neighborhoods from good sites to poor ones (for which we pay the utility a small amount per kWh) and CEFIA maximizes the area installed in every case. We have limits on good roof area and lots of homeowners with no solar access and no way to utilize other sites with good access. This seems like a great opportunity that we are ignoring.

This is a policy that is needed now if we want to see a continued expansion of the solar market in Connecticut. I would gladly be the first investor in a remote site.

In addition, Citizens for a Greener Manchester would like to voice our support for several other additions to the energy policy plan as set forth in the 2013 Energy Advocates Principles and Positions paper of 2/19/2013 (https://docs.google.com/viewer?a=v&pid=forums&srcid=MDYxNzk0ODQ3Njk1ODc5NDU5OTMBMDcxMzk5OTE1ODYzMTY1MTE2ODABeUlBWGd0TlowZUVKATQBAXYy)

Thank you.

Eugene A. DeJoannis

Citizens for a Greener Manchester

280 Scott Drive

Manchester, CT 06042